

WHAT IS CLAIMED IS:

1. An optical device wherein an optical component and a plurality of light emitting elements are mounted on an identical substrate, a level of a surface on which the optical component is mounted is different from that of a surface on which the light emitting elements are mounted by a step provided on the substrate, at least one plane vertical to the surface on which the optical component is mounted and located on a periphery of the substrate is opened, a reflecting surface, a transmitting surface or a diffraction grating surface of the optical component is provided along sides generated by the step provided in said substrate, optical axes of the plurality of light emitting elements of which polarization axes are in parallel with each other intersect with each other on the surface, and an exit light beam of the light emitting elements is emitted from the opened plane.
2. An optical device according to claim 1, wherein thin film electrodes for electrically connecting with said plurality of light emitting elements are provided on the surface on which the light emitting elements are mounted and in a range surrounded by the optical axes of the light emitting elements and an intersecting point of the optical axes.
3. The optical device according to claim 1 or 2, wherein a through-hole is formed in a part of said substrate, and a photo acceptance element for detecting

an emitting light passing through said through-hole is provided.

4. An optical pickup comprising a light emitting element for recording/reproducing information on/from a recording medium disk, a photo acceptance element to be a detector, and an optical component for conducting a detected light from the light emitting element to the photo acceptance element, wherein the pickup has the optical device according to any one of claim 1 to 3.

5. An optical pickup comprising a light emitting element for recording/reproducing information on/from a recording medium disk, a photo acceptance element to be a detector, and an optical component for conducting a detected light from the light emitting element to the photo acceptance element, wherein the thin film electrodes of the optical device according to claim 2 are placed at a position away from a center of the disk, an external wiring is directly connected to the thin film electrodes, and the external wiring is provided along an outer periphery of the disk of the optical pickup.

6. An optical disk apparatus for recording/reproducing information on/from a recording medium disk, and controlling an optical pickup and processing a signal from said optical pickup, wherein the apparatus has the optical pickup according to claim 4 or 5.